

IN THE CLAIMS

The status of the claims as presently amended is as follows:

1. (Currently Amended) A sound reproducing apparatus for driving a plurality of speakers to reproduce multi-channel sound, the sound reproducing apparatus comprising:
~~generation means for generating a generator that generates~~ a measuring signal and
~~supplying-supplies~~ the measuring signal to a to-be-detected speaker of the plurality of speakers;
at least two sensors disposed in a listening position, each of the at least two sensors transmitting a reception notification when receiving a measuring sound wave radiated from the to-be-detected speaker in accordance with the measuring signal;
~~a time difference measuring-means for measuring unit that measures~~, as to each of the at least two sensors, a time difference between a time instant when the measuring signal is generated and a time instant when the reception notification is received from each of the at least two sensors;
~~a distance calculating-means for calculating calculator that calculates~~, as to each of the at least two sensors, a distance between each of the at least two sensors and the to-be-detected speaker based on the measured time difference;
~~a position calculating-means for calculating calculator that calculates~~ a position of the to-be-detected speaker based on a distance between the at least two sensors and the calculated distance; and
~~a storage-means for storing that stores~~ the calculated position of the to-be-detected speaker.
2. (Currently Amended) The sound reproducing apparatus according to Claim 1, comprising ~~a speaker layout correction means for changing corrector that changes~~ over signal lines from an amplifier to the speakers and ~~correcting corrects~~ an incorrect layout of the speakers when it is judged that respective speaker positions stored in the ~~storage-means~~ are out of a predetermined relative position relationship of the speakers.
3. (Currently Amended) The sound reproducing apparatus according to Claim 1, comprising a sound field control means for producing ~~controller that produces~~ sound image localization as if the speakers were located in predetermined recommended positions, respectively, based on respective positions of the speakers stored in the ~~storage-means~~.
4. (Currently Amended) The sound reproducing apparatus according to Claim 1, wherein:

a distance between at least two speakers of the plurality of speakers is known; and the ~~position-calculating means~~ calculator calculates a distance between the at least two sensors and positions of the at least two sensors based on distances between the at least two sensors and the at least two speakers calculated by the ~~distance-calculating means~~ calculator, and the distance between the at least two speakers.

5. (Currently Amended) A sound reproducing apparatus for driving a plurality of speakers to reproduce multi-channel sound, the sound reproducing apparatus comprising:

~~generation means for generating a generator that generates~~ a measuring signal and ~~supplying supplies~~ the measuring signal to at least two measuring speakers of the plurality of speakers in turn, the measuring speakers having known positions with respect to a listening position;

a sensor that is attached to a to-be-detected speaker and transmits a reception notification as to each of the at least two measuring speakers when receiving a measuring sound wave radiated from each of the measuring speakers in accordance with the measuring signal;

a time difference measuring means for measuring unit that measures, as to each of the at least two measuring speakers, a time difference between a time instant when the measuring signal is generated and a time instant when the reception notification is received from the sensor;

a distance calculating means for calculating calculator that calculates, as to each of the at least two speakers, a distance between each of the measuring speakers and the to-be-detected speaker based on the measured time difference;

a position calculating means for calculating calculator that calculates a position of the to-be-detected speaker based on a distance between the at least two measuring speakers and the calculated distance; and

a storage means for storing that stores positions of the at least two measuring speakers and the calculated speaker position.

6. (Currently Amended) The sound reproducing apparatus according to Claim 5, comprising a ~~speaker layout correction means for changing corrector that changes~~ over signal lines from an amplifier to the speakers and ~~correcting corrects~~ an incorrect layout of the speakers when it is judged that respective speaker positions stored in the ~~storage means~~ are out of a predetermined relative position relationship of the speakers.

7. (Currently Amended) The sound reproducing apparatus according to Claim 5, comprising a sound field-control means for producing controller that produces sound image localization as if the speakers were located in predetermined recommended positions, respectively, based on respective speaker positions stored in the storage means.

8. (Currently Amended) A method of identifying positions of a plurality of speakers by use of at least two sensors disposed in a listening position, the method comprising the steps of:

generating a measuring signal and supplying the measuring signal to one of the plurality of speakers;

transmitting a reception notification when each of the at least two sensors receives a measuring sound wave radiated from the to-be-detected speaker in accordance with the measuring signal;

measuring, as to each of the at least two sensors, a time difference between a time instant when the measuring signal is generated and a time instant when the reception notification is received from each of the at least two sensors;

calculating, as to each of the at least two sensors, a distance between each of the at least two sensors and the to-be-detected speaker based on the measured time difference;

calculating a position of the to-be-detected speaker based on a distance between the at least two sensors and the calculated distance; and

~~providing a storage means for storing the calculated speaker position of the speaker into a storage.~~

9. (Currently Amended) The method according to Claim 8, further comprising the step of changing over signal lines from an amplifier to the speakers and correcting an incorrect layout of the speakers when it is judged that stored positions of the speakers are out of a predetermined relative position relationship ~~among~~ of the speakers.

10. (Original) The method according to Claim 8, further comprising the step of producing sound image localization as if the speakers were located in predetermined recommended positions respectively, based on stored positions of the speakers.

11. (Currently Amended) ~~The A method according to Claim 8, further of identifying positions of a plurality of speakers by use of at least two sensors disposed in a listening position, the method comprising the steps of:~~

supplying the measuring signal in turn from the generation means to at least two measuring speakers of the plurality of speakers, the at least two measuring speakers ~~has~~ having a known distance from each other; ~~and~~

transmitting, as to each of the two measuring speakers, a reception notification when each of the at least two sensors receives a measuring sound wave radiated from each of the measuring speakers in accordance with the measuring signal;

measuring, as to each of the at least two measuring speakers, a time difference between a time instant when the measuring signal is generated and a time instant when the reception notification is received from each of the at least two sensors;

calculating, as to each of the at least two measuring speakers, a distance between each of the at least two sensors and each of the measuring speakers based on the measured time difference; ~~and~~

calculating positions of the at least two sensors and a distance between the at least two sensors based on a distance between each of the at least two sensors and each of the measuring speakers and a distance between the at least two speakers; and

storing the calculated position of the speaker into a storage.